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Geography illiteracy and reforming geography education in Egypt among university undergraduate students

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Abstract

For ages, Science has suffered from the ebb and flow of the same seashores. Geography in Egypt has been the center of these waves and fluctuations for more than fifteen years, although it takes about half this time in other countries such as Saudi Arabia, Qatar, United Arab Emirates, and even the United States of America. The result of this negligence of learning geography in the secondary schools in Egypt is reflected in the level of students and its effect on their knowledge about the geography of their country when they joined (present and not past) the university.

This paper aims to assess the level of geographic literacy among undergraduate students of geography in the Faculty of Arts, Minia University in Egypt, and to follow the reasons behind the decrease in the interest of studying geography, which has an impact on the level of students' information and knowledge about their country. Also the study investigates the factors that may have influenced this geographic literacy among students. The Educational system policy in Egypt has played a negative role in the intellect of the people, and drove them out of learning geography. Because of the various troubles in the educational policy scene in Egypt during the last decade of the twentieth century, the Ministry of Education decided to let the geography subject in the secondary schools into an optional subject. Consequently, many students do not choose it, and this leads geography to become a marginal subject.

Keywords: Geography; Education; Geographic Literacy; Undergraduate; Methods.

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1. Methods and Materials

To measure the individual differences among the students in their knowledge about the geography of their country, this questionnaire is designed to meet the differences among them according to four hypotheses:

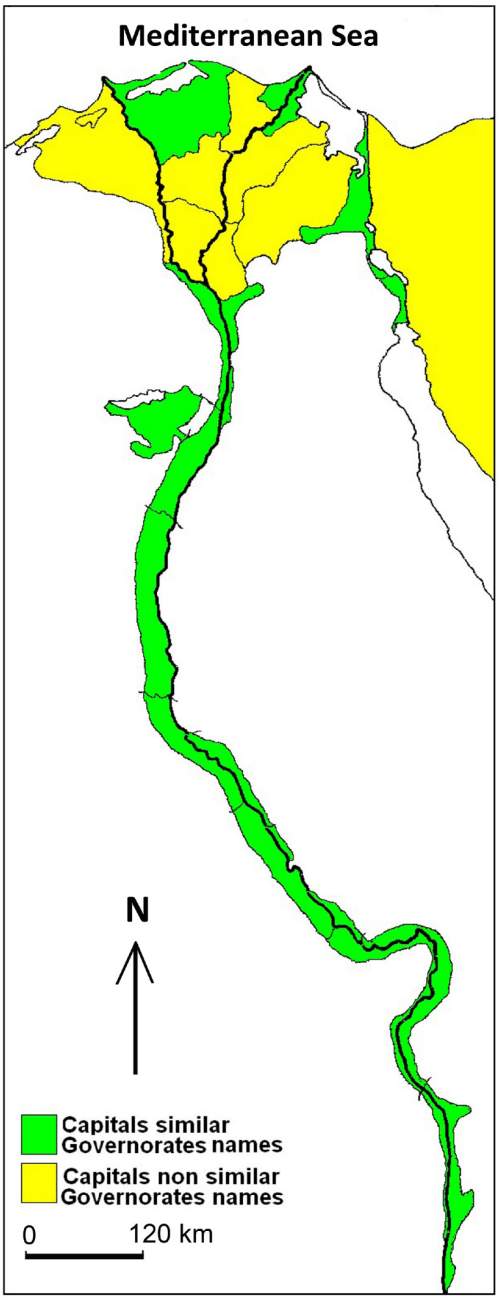

Fig. 1. Similar and non-similar Egyptian Governorates capitals

- Are there differences among students in the level of geographic information the country according to specialty whether cartography or general geography section?
- Are there gender gap differences between male and female students in the level of geographic illiteracy about their country knowledge?
- Are there differences among students concerning their residence status? So students who live in Upper Egypt know about their cities and local environment more than other students who live in middle Egypt or Delta.
- Are there any differences among students because of the educational, cultural level, or the level of English language?

2. Procedures

A questionnaire was applied to all students of Cartography Section (36 students) who attended lecturers of the Art Design on 21 Oct. 2012, and on the total sample students (13 students), in General Geography Section in 22 Oct. 2012

The survey was designed to assess the level of knowledge of the geography of Egypt, under the slogan (Know Your Country), these questions include background about the capitals of some governorates, the important cities in every governorate in Upper and Lower Egypt, famous industrial activities in both Upper and Lower Egypt, in addition to agriculture crops in both too. This questionnaire contains 50 points which include answers from MCQ questions, filling in the spaces, and open answers (See model 1 in Appendix)

The results of the study confirmed that the percentage of correct answers to all the questions are as follows:

- 24% students of Geography Department of the General Division
- 28% among students of Geography
- Department of the Cartography Division
- 26% among Male students
- 24 % among Female students

Figure 1 shows the Egyptian governorates capitals whose names differ from the name of governorate, as well as the governorates carrying the same name for both governorate and the Capitals.

3. Results

Geography in general suffers not only from being unacceptable, but also from the inability to define itself properly, and as such, has been neglected, marginalized, and largely eliminated from the classrooms in both Egypt &USA the result has led to a geographically illiterate populace (Dylan R. Paul, 2011, p60).

Table 1 show the number and percentage of students who answered correctly about the Capital of some Egyptian governorates among students in Cartography Section and General Section in the Geography Department at Minia University. And Fig. 2 show the Famous cities in industrial activity in Delta Nile, Egypt.

Table 1. Correct answers about some Egyptian Capital Governorates, among Geography Department students in the Faculty of Arts

Governorate	Number of correct answers among Cartography students	Percent %	Number of correct answers among General geography students	Percent %	Percent of correct answers among Male	Percent of correct answers among Female
Red sea	26	72.2	9	69.2	69	77.8
Elsharkia	25	69.4	11	84.6	69	83.3
Mounofia	9	25	5	46.2	27.6	33.3
Kalubia	7	19.4	2	15.4	20.7	16.7
Dakahlia	21	58.3	10	76.9	51.7	83.3
Behera	27	75	9	69.2	72.4	77.8
Gharbia	15	41.7	6	46.2	34.5	61.1
Matrouh	27	75	9	69.2	75.9	72.2
Aswan	22	61.1	5	38.5	69	33.3
New Valley	10	27.8	1	7.7	27.6	11.1

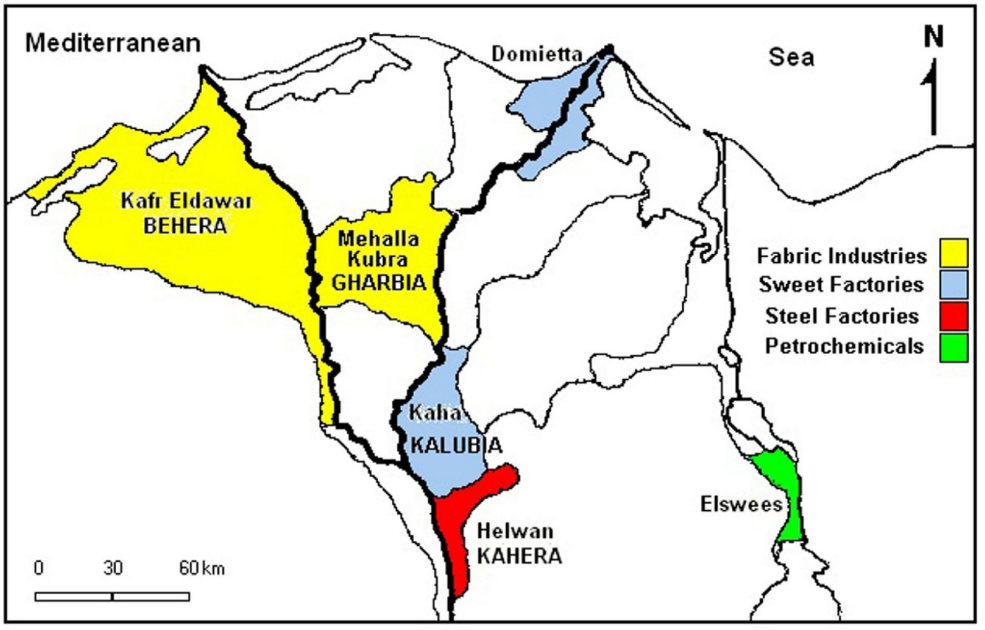

Fig. 2. Famous cities in industrial activity in Delta Nile, Egypt.

The first variable in this study was the effect of specialization in the Geography Department between Cartography Section and General Geography students in the level of geographic illiteracy about their country information knowledge. The participants in this survey showed a poor level of geographic knowledge. The mean score of the geographic information was 24.6% among General Geography Section, and around 28.3% among Cartography Section. And it means that the mean of the score of all students is not up to 25 %.

This result ensures the fact of the standards expect students to use their mental maps to answer geographic questions and to produce and use maps to illustrate and analyze geographic information (Bednarz, S.W., 2004., 226).

Table 2 and Fig. 3 show the number and percentage of students in the Geography Department who answered correctly about dependency of some cities in Delta and Upper Egypt to their governorates 2012. Fig. 4. show the percentage of correct answers, about dependency of some Egyptian cities to their Governorates among Geography Department students in the Faculty of Arts 2012.

Table 2. Number and percentage of correct answers, about dependency of some Egyptian cities to their governorates among Geography Department students in the Faculty of Arts, Minia University

City	Number of correct answers among Cartography students	Percent %	Number of correct answers among General geography students	Percent %	Percent of correct answers among Males	Percent of correct answers among Females
Armant	6	16.7	1	7.7	17.2	11.1
ElWasty	25	69.4	4	30.8	79.3	27.8
Tahta	10	27.8	4	30.8	27.6	27.8
Elbadary	13	36.1	3	23.1	37.9	27.8
DerMoias	35	97.2	10	76.9	82.8	77.8
Eledwa	35	97.2	11	84.6	79.3	94.4
Deshna	13	36.1	7	53.8	27.6	66.7
Ebshway	1	2.8	1	7.7	3.4	5.6
Somosta	15	41.7	0	0	44.8	5.6
Manfalot	21	58.3	7	53.8	72.4	61.1
DiarbNegm	3	8.3	2	15.4	3.4	16.7
Zefta	6	16.7	2	15.4	20.7	11.1
Sedi Salem	4	11.1	0	0	6.9	0
Fowa	3	8.3	0	0	10.3	5.6
Elhamul	4	11.1	0	0	13.8	0
Meetghamr	0	0	2	15.4	0	11.1
Basuin	0	0	0	0	0	0
Belkas	0	0	0	0	0	0
Talkha	2	5.6	1	7.7	6.9	5.6
Elriadh	3	8.3	0	0	10.3	0

The results of the study show that the students' knowledge about dependency of some Egyptian cities to their Governorates, inversely proportional to the distance from the residence. Most of them are from middle Egypt, and their knowledge of nearby cities is more than their knowledge of delta or southern Egypt cities.

The second variable was to study the effect of gender, between males and females on the ratio of geographic illiteracy. The results confirmed that this rate between males is 28.45% whereas between females is 25.44 %. This ratio reflects the interest of male students in learning than females although the ratio is convergent.

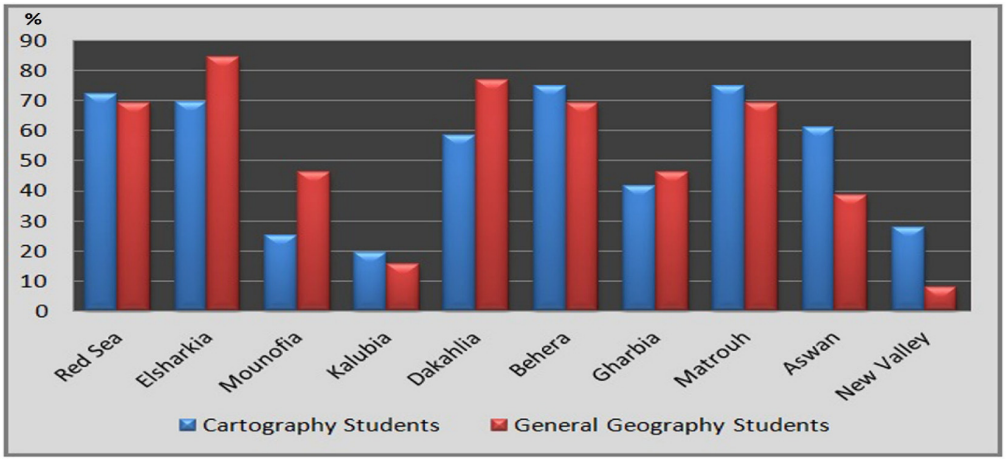

Fig. 3. Percentage of correct answers, about some Egyptian Capital Governorates

Figures 5,6 show the Percentage of correct answers among cartographic and Geographic students for some cities dependency Egyptian governorates

Figure 7 and 8 show the gender gap difference between males and females in their correct answers about remembering some of Egyptian Capital Governorates. We can see clearly that females are better than males. However, males outperform females in their knowledge of belong a number of Egyptian cities of the governorates as shown from figures 9 and 10.

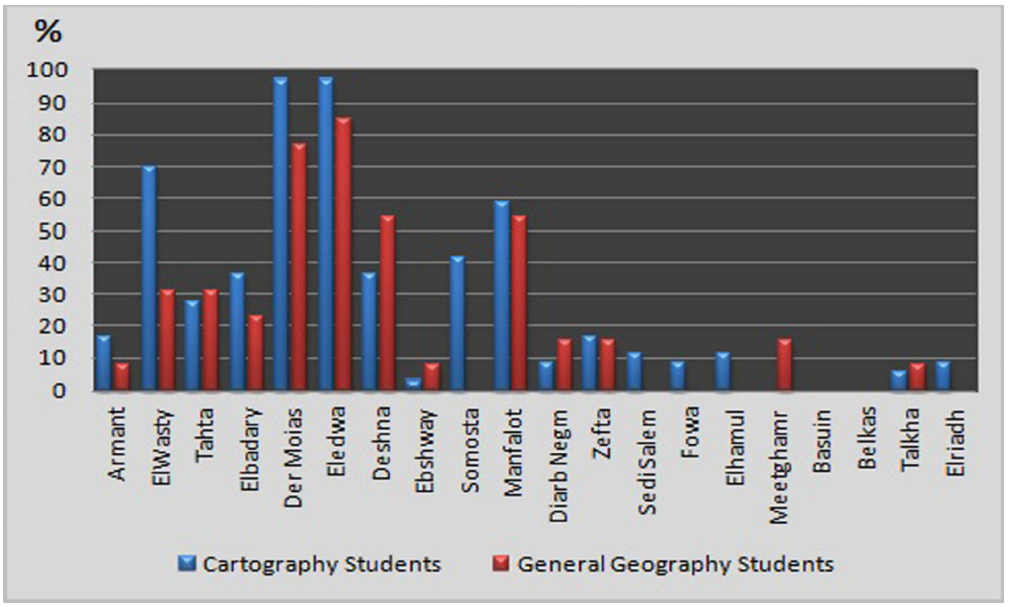

Fig. 4. percentage of correct answers, about dependency of some Egyptian cities to their Governorates

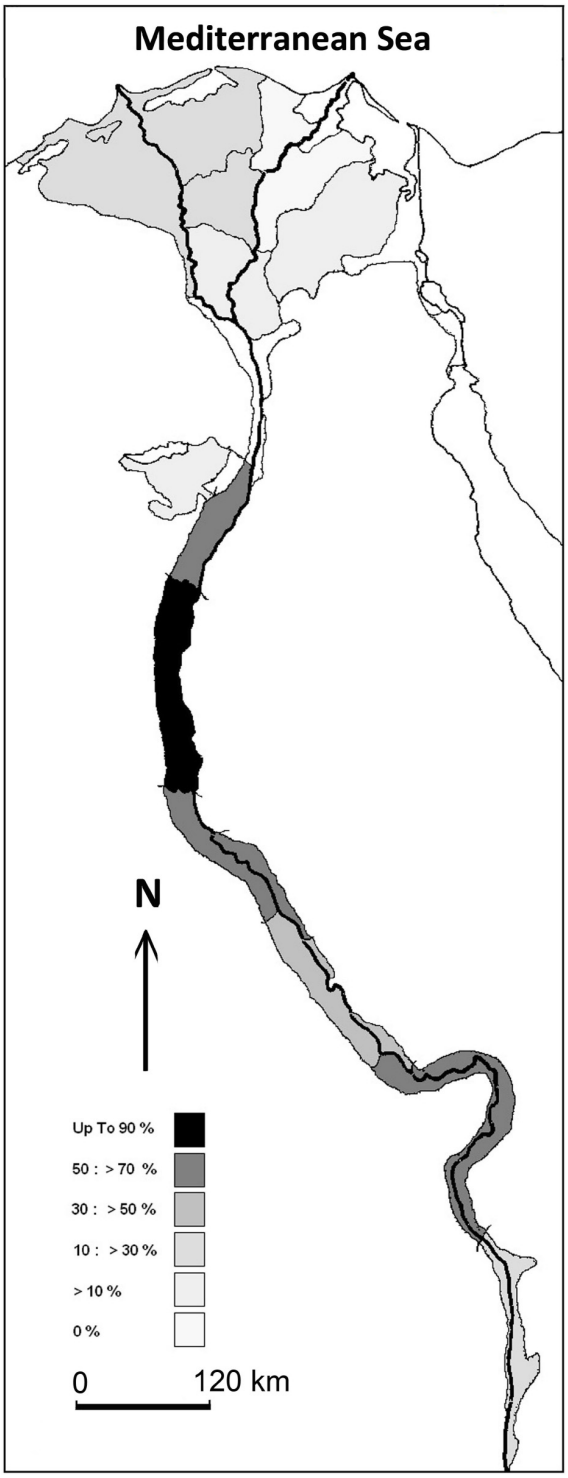

Fig. 5. Percentage of correct answers to cartographic students for some cities dependency Egyptian governorates

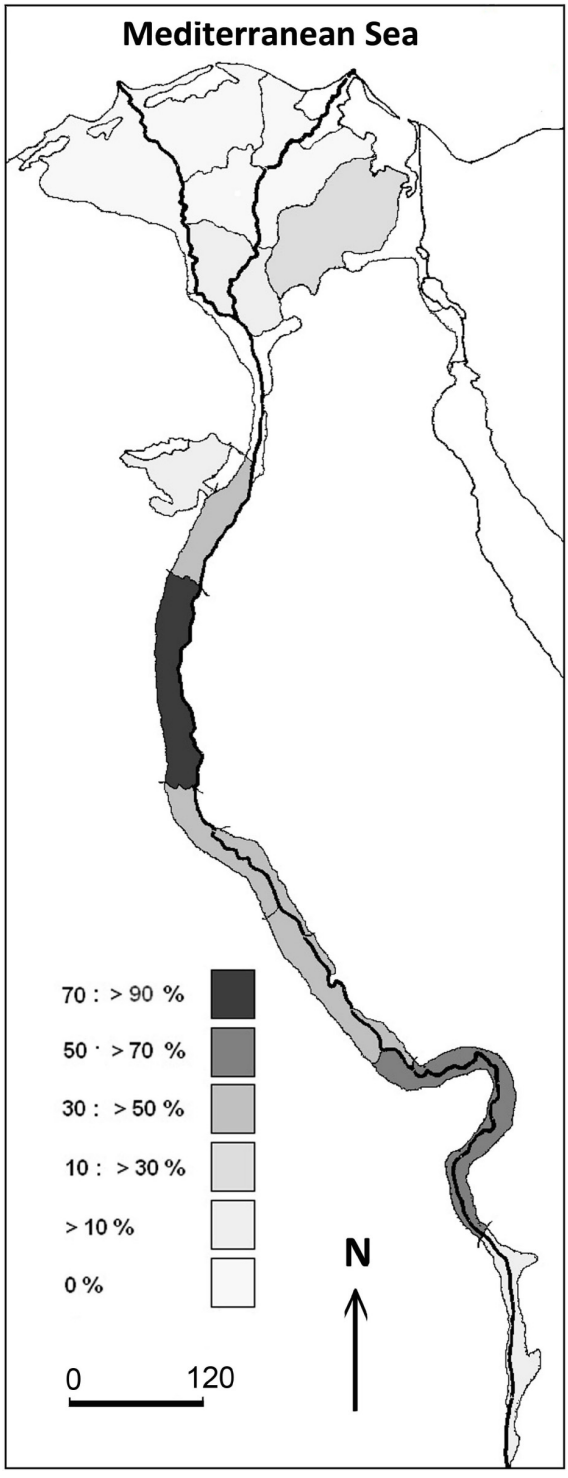

Fig. 6. Percentage of correct answers to Geographic students for some cities dependency Egyptian governorates

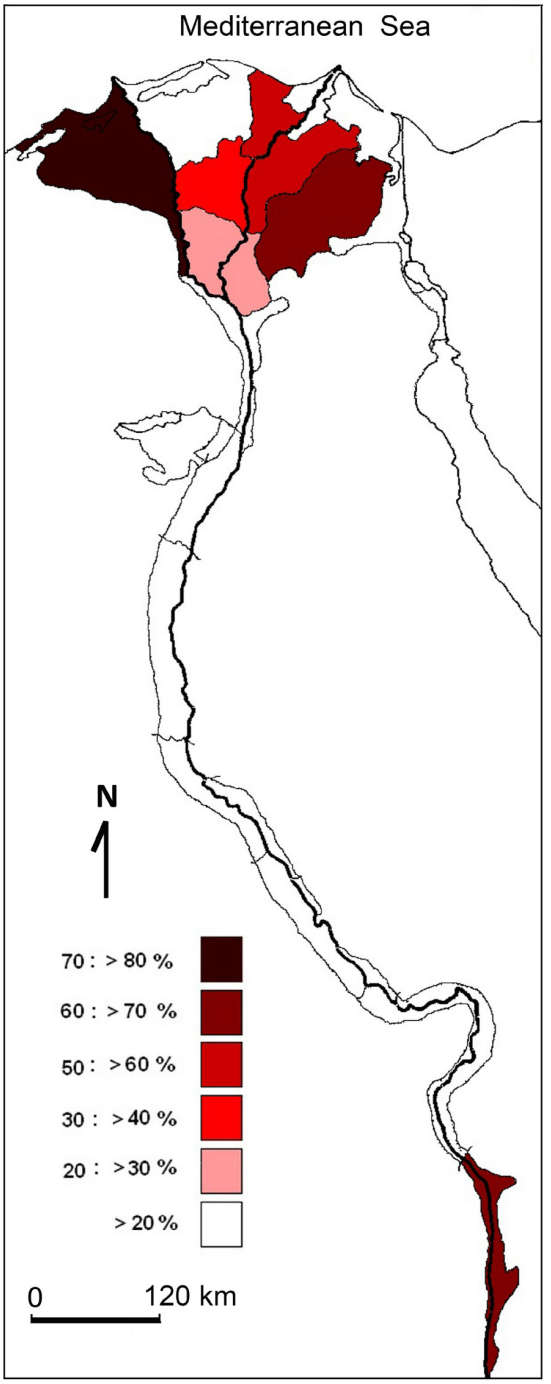

Fig. 7. Percentage of correct answers to male students for some Capitals of Egyptian governorates

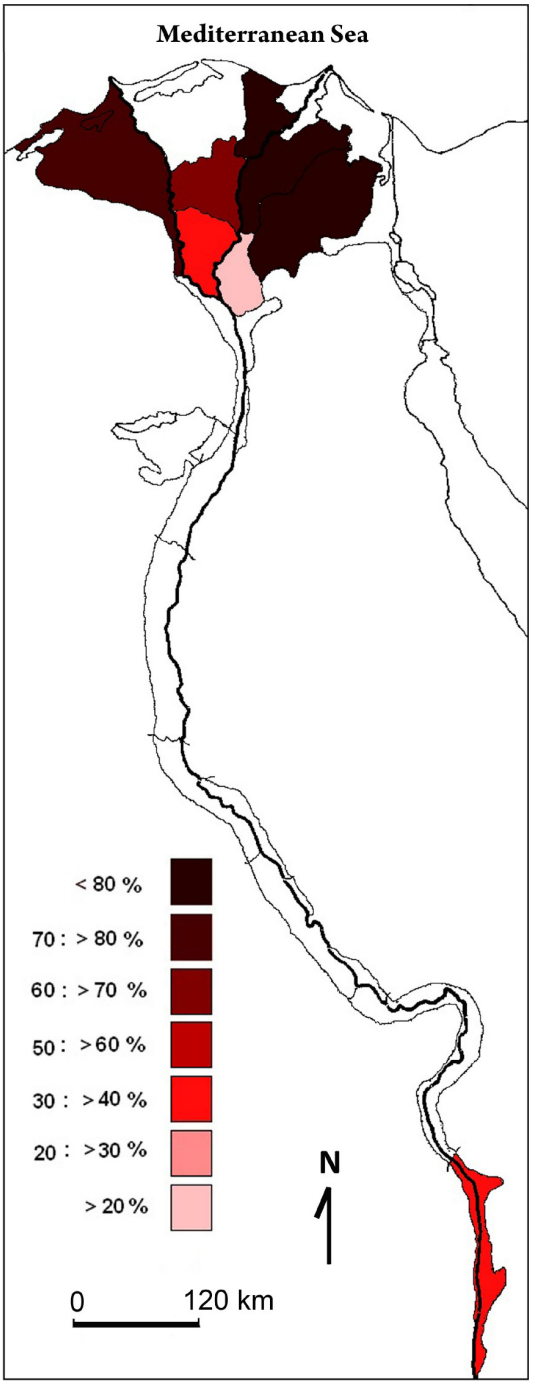

Fig. 8. Percentage of correct answers to female students for some Capitals of Egyptian governorates

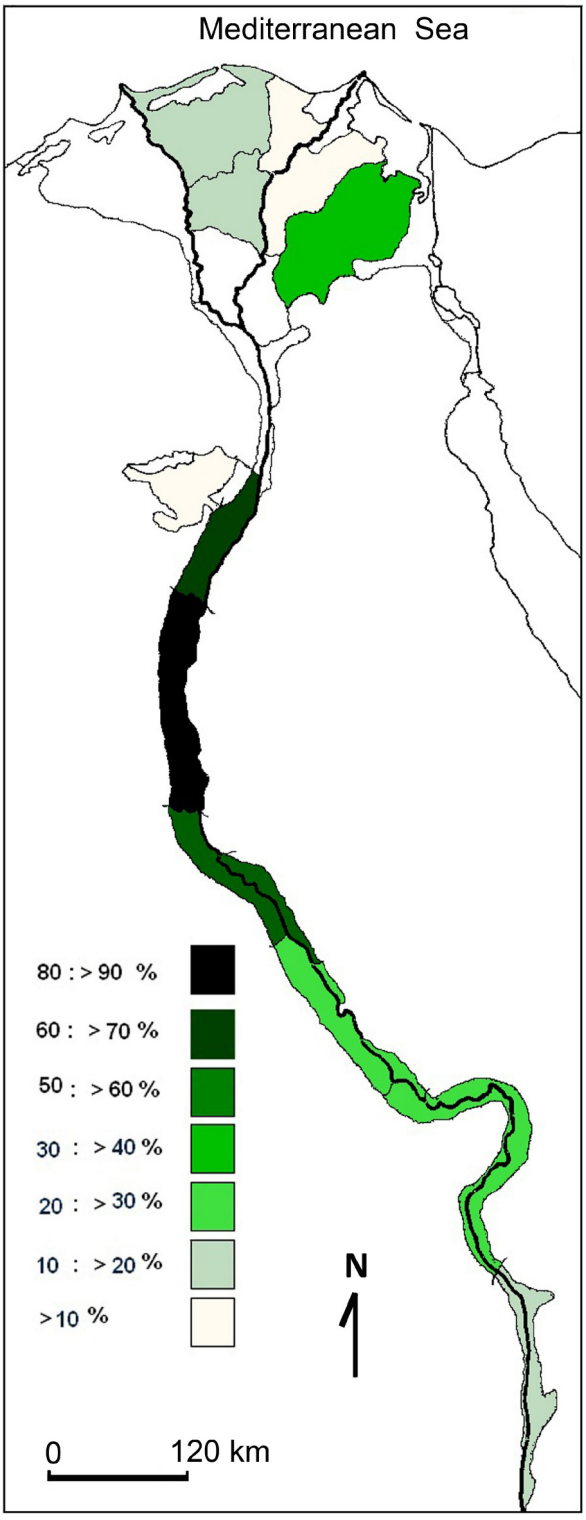

Fig. 9. Percentage of correct answers to male students for some cities dependency Egyptian governorates

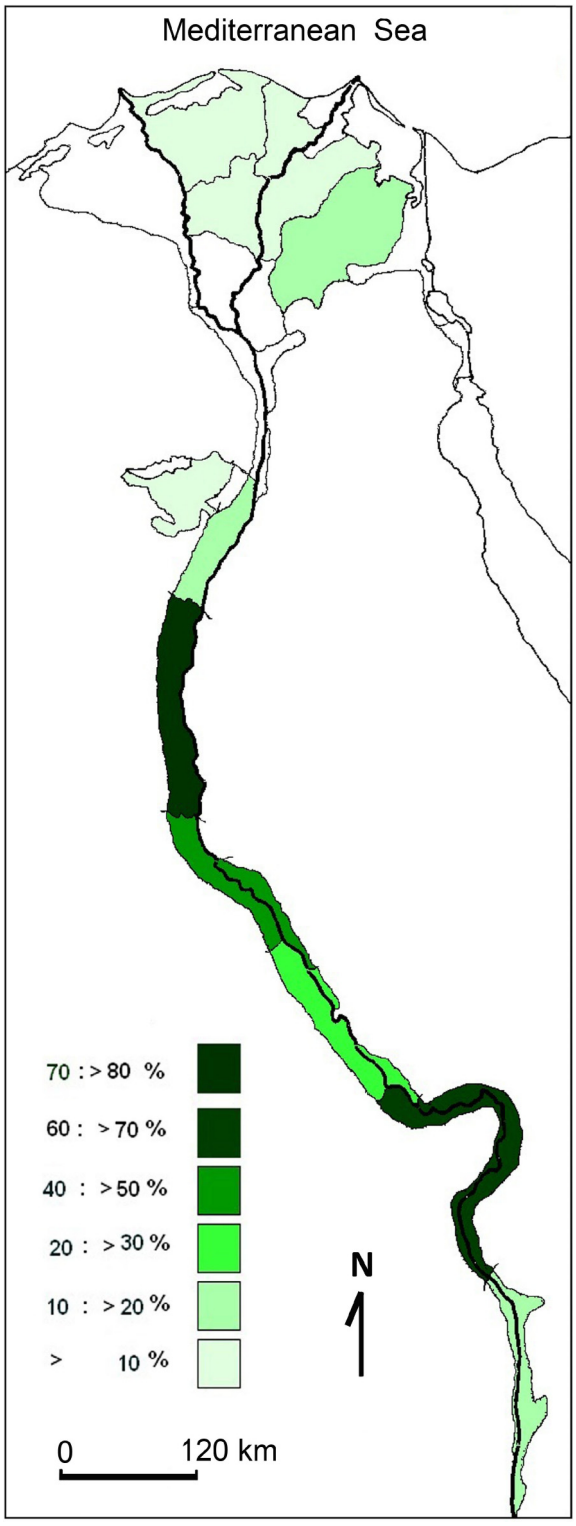

Fig.10. Percentage of correct answers to female students for some cities dependency Egyptian governorates

The third variable has analyzed the effect of residency status of students whether they are living in Upper Egypt or Delta. Residence status was a significant criterion in the rate of geographic illiteracy because most of the students were from Upper Egypt and most of them did not go further from Cairo. So their knowledge about Nile delta governorates was skimpy.

The study confirmed that residence was an effective factor in the level of students' knowledge about their close environment either between Cartography Section and General Geography. All students were living in the Upper and Middle Egypt and their knowledge about these environments was 49.4 between Cartographic students and 36.9% between General Geography sections. At the same time their knowledge about Lower Egypt and Delta was 6.7% between Cartographic Section and 5.4% between General Geography.

The students' answers reflect the effects of the place residence on their answers because most of them ignored any site or place far from their residence; especially they didn't visit or know any information about it before.

The fourth variable was to study the role of the educational and cultural level and the ability of mastering foreign languages and their effect on the level of geographic literacy among students. Most of the students did not know any foreign language well. So it is not a significant criterion for the comparison among them.

4. Conclusion (Reforming geography Education pathway)

Reforming Geography education in Egypt requires some procedures like:

- Developing the methods of geography teaching in prep &secondary schools in general through adding essential subjects that can help students develop their skills with the use of map reading, like interpretation and distribution, and this would motivate the students to learn geography even if the subject is optional.
- Changing the methods of evaluating students for their ability to understand, analyse, clarify, and deduce results
- Changing the style of geographic learning periodically in the universities, that will suit the demands of the labor market and its changing needs.
- Paying attention to the ways of digital geography teaching and transforming the tradition of methods of teaching to E-learning, and using software applications to develop the skills of students by understanding the distribution and analysis of databases using Geographic Information Systems.
- Giving special emphasis to geographic journey in the field study, especially for the undergraduate students. Geography should not be taught without geographical field study to consolidate the concepts of belonging and citizenship among students in the early stages of life.
- Paying considerable attention to the Egypt ecology in high schools and universities. This is very important for the students to know everything about their country, problems, present and future, also training of professors in order to be in touch with all new trends in geography teaching and cartographic development.

Appendix

Minia University
Faculty of Arts
Geography Department

(Model 1) Questions that measure geography illiteracy among students in geography department, Minia University, Egypt.

Name: Address Mobile:
Grade: Specialization

1- Which of the following cities is the Capital of the governorate beside it:-

1-**Red Sea** (Elein Elsokhna- Hurghada – Eltour – Rasghareb – Siwa –Berma)
2-**Elsharkia** (Diarb Negm – Shebeen Elkanater – Belkas –Hamoul – Zagazig)
3-**Monofia** (Monouf–Santa–Mehalla Kobra –Shebeen Elkom–Senbelaween)
4- **Kalubia (**Fackus - Khanka - Kaluib - Tanta – Benha – Tokh – Kaha)
5- **Dakahlia** (Talkha – Berma – Zefta – Mansura – Mataria – Basuen)
6- **Behera (** Edko – Maruit – Kaleen – Rahmania – Damanhur – Tala –Benha)
7- **Gharbia (** Mansurah- Berma – Riadh – Tanta – Santa – Berkat Elsaba)
8- **Marsamatrouh (**Hammam – Mahmodia – Salum –Matrouh- Balteem)
9- **Aswan (** Arment – Edfo – Gerga – Aswan – Nasser – Naghamady)
10-**New Valley** (Dakhla – Kharga – Farafra – Sewa – Paris – Balat – Dairut)

2- In which Governorate are these cities situated :

Armant		Diarb Negm	
ElWasty		Zefta	
Tahta		Sedi Salem	
Elbadary		Fowa	
DerMoias		Elhamul	
Eledwa		Meetghamr	
Deshna		Basuin	
Ebshway		Belkas	
Somosta		Talkha	
Manfalot		Elriadh	

3- Which City is famous in industrial activity :

1- Nagaa hammady 2- Mehalla Kubra
3- kafr Eldawar 4- Maghagha
5- Helwan 6-Elswees
7- Kaha 8- Raskhareb
9- Domietta 10- BorgElarab

4- which plants in the following Provinces are famous :

1- Kaluib 2- Sedi Salem
3- Motobus 4- Armant
5- Somosta 6- Elhamool
7- Alrahmania 8- Manfalout
9- Edfena 10- Kaha

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